

MALKIN, Ya.Z.; SMIRNOV, M.P.; SERGIYENKO, V.Ya.; KOZHEVNIKOVA, G.I.;  
KALNIN, Ye.I.; TARKHOV, N.G.; Primali uchastiye: MURSAITOV, Kh.I.;  
ABDUGAPAROV, Sh.A.; BOVGUTA, I.D.; TKACHEV, S.P.; FILATOV, N.V.;  
SVISTEL'NIKOV, A.M.; PRACHEV, V.N.; SHEYMAN, V.I.; ANTROPOV, A.D.;  
SOBOLEV, Ye.D.; POPOVA, N.T.

Industrial testing of a new continuous method of copper removal  
from crude lead. TSvet. met. 34 no.3:15-22 Mr '61. (MIRA 14:5)

1. Eksperimental'nyy tsekh Chimkentskogo svintsevoogo zavoda (for  
Mursaitov, Abdugaparov, Bovguta, Tkachev, Filatov, Svistel'nikov,  
Prachev, Sheyman, Antropov, Sobolev, Popova).  
(Lead--Metallurgy) (Copper)

SHEYMANN, Yu.M.

Relationships between magma types and tectonics. Sov.geol. 7 no.2:  
3-17 F '64. (MIRA 17:3)

1. Institut fiziki Zemli AN SSSR im. O.Yu.Shmidta.

SHEYMANN, Yu. M.

Length of time of rebuilding the continental crust into an  
oceanic one (based on the data of the northern Atlantic).  
Izv. AN SSSR.Ser.geol. 29 no. 1:42-49 Ja '64. (MIRA 17:5)

1. Insitut fiziki Zemli AN SSSR, Moskva.

APRELKOV, S.Ye.; SHEYMOVICH, V.S.

Ancient volcano of southeastern Kamchatka with present-  
day hydrothermal phenomena. Biul. vulk. sta. no.36:60-65 '64.  
(MIRA 17:9)

SHEYMOVICH, V.S.

Thermal springs in the upper Mitnovskaya Valley. Vop. geog.  
Kamch. no. 2:104-105 '64 (MIRA 19:1)

KUZNETS, M.M., professor, otvetstvennyy redaktor; KARYSHEVA, K.A.; professor, redaktor; KORYAKIN, G.Ye., redaktor; KRICHEVSKIY, A.M., professor, redaktor [deceased]; MATUSKOV, S.I., dotsent, redaktor; TSERADIS, G.S., kandidat meditsinskikh nauk, starshiy nauchnyy sotrudnik, redaktor; SHEYN, A.A., professor, redaktor; BOGDANOVICH, S.N., redaktor; GITSHTEYN, A.D., tekhnicheskiiy redaktor.

[Present-day problems in dermatology; a collection of papers from dermatological and venereological institutes (Ukraine, Kharkov, Kiev, Lvov, and Odessa) of the U.S.S.R. Ministry of Public Health] Sovremennye voprosy dermatologii; sbornik trudov nauchno-issledovatel'skikh kozhno-venerologicheskikh institutov (Ukrainskogo, Khar'kovskogo, Kievskogo, L'vovskogo i Odesskogo) Ministerstva zdravookhraneniia USSR. Red.kollegiia; M.M.Kuznets i dr. Kiev, Gos.med.izd-vo USSR.1957. 201 p.

(MLRA 10:6)

1. Ukraine. Ministerstvo zdravookhraneniya.  
(DERMATOLOGY)

USSR / Human and Animal Physiology. Nervous System. T  
Higher Nervous Activity. Behavior.

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102279.

Author : Sheyn, A. A.

Inst : Komi-Pedagogical Institute

Title : On Psychological Concepts and the Singularity of  
Psychological Investigation.

Orig Pub: Uch. zap. Komi ped. in-t, 1958, vyp. 6, 185-200.

Abstract: No abstract.

Card 1/1

104

SHEYN, A.I., inzhener; GLEYZER, A.I., inzhener.

Further development of river transportation of grain. Rech. transp.  
16 no.1:20-24 Ja '57. (MIRA 10:3)

(Grain--Transportation)  
(Inland water transportation)



~~SHEYN~~, A.L., nauchnyy sotrudnik

Grain cargees. Trudy TSNIEVT no.13:59-112 '58.  
(Grain--Transportation)

(MIRA 11:12)

SHEYN, A.<sup>L.</sup>, nauchnyy sotrudnik

Efficient systems for transporting grain to the Transcaucasian  
Republics. Mor. flot 18 no.4:9-10 Ap '58. (MIRA 12:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut ekonomiki i  
ekspluatatsii vodnogo transporta.  
(Grain--Transportation)

5114, 111  
DROBYAZGO, D.P.; PERMINOV, T.A.; SHEYN, A.N.; BELOVA, E.D.; GOLIKOVA, A.I.

Pea-hydrolysate culture medium in the production of tuberculin.  
Trudy Gos.nauch.-kont.inst.vet.prep. 4:98-100 '53. (MLBA 7:10)

1. Kurskaya biofabrika.  
(Tuberculin) (Bacteriology--Culture and culture media)

USSR/Microbiology - General Microbiology.

F-1

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67057

Author : Govorov, A.M., Ostashko, F.I., Sheyn, A.N., Belova, K.D.

Inst : -

Title : A Synthetic Culture Medium for Growing Tubercular Cultures and for Preparing Tuberculin.

Orig Pub : Inform. byul. biol. prom-sti, 1957, No 2, 13-14.

Abstract : No abstract.

Card 1/1

- 3 -

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7

**Rapid determination of ferrous oxide in chromite.** A. V. Shein. *Zarodskaya Lab. 6, 505-8(1937).*—The method overcomes the impossibility of decomp. chromite with  $H_2SO_4 + HF$ . A 3-g. sample in a boat is ignited in a current of dry O in an elec. furnace at  $1000^\circ$  for 30 min. The water of constitution and  $CO_2$  are absorbed in a U-tube filled with ascarite and weighed. The O used in the oxidation of FeO to  $Fe_2O_3$  (16 g. for 144 g. FeO) is detd. by the increase in wt. of the ignited residue:  $np - (N - l) = np + l - N$ , where  $np$  is the wt. of ignited residue,  $N$  is the wt. of sample and  $l$  is the wt. of the volatile matter ( $H_2O + CO_2$ ). The percentage of FeO is then calcd. for a 1-g. sample by the formula:  $9(np + l - N)100/N$ . The results are accurate to 0.1%. Chas. Blanc

ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION

ca

7

Determination of ferrous oxide in chromite. A. V. Shein, *Zarodskaya Lab.* 6, 1199-205(1937); cf. C. A. JI, 7704<sup>1</sup>.—Several tentative procedures for detg. FeO in chromite, magnetite and other difficultly sol. minerals are described, of which the following gave the best results.

(1) Ignite the sample in pure N<sub>2</sub> at 900-1000° for 21-30 min. to expel volatile matter. Weigh, heat the residue in O at 1100° for 1 hr. and again weigh. Calc. FeO from the amt. of O used in the oxidation of FeO to Fe<sub>2</sub>O<sub>3</sub>.

(2) To 0.25 g. chromite add 20 cc. H<sub>2</sub>O, (d. 1.7), 10 cc. H<sub>2</sub>SO<sub>4</sub> and 0.07-0.08 g. V<sub>2</sub>O<sub>5</sub> and heat on a hot plate at 600-80° to fuming (10-12 min.) and then to dissolving (10-15 min.). Treat the cold soln. with 100 cc. H<sub>2</sub>O, boil, cool with tap water, introduce 5 drops of Na di-phenylamino-sulfonate (1.0 g. of the Na salt in 200-300 cc. H<sub>2</sub>O is decompd. with 1-1.5 g. Na<sub>2</sub>SO<sub>4</sub>), then boiled, filtered and dild. to 500 cc.) and titrate back the excess V<sub>2</sub>O<sub>5</sub> with 0.025 N FeSO<sub>4</sub>. The results by either method are accurate to 0.05%. Eighteen references. C. Blane

ASD VIA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
<p>CH</p> <p>PROCESSES AND PROPERTIES</p> <p>The preparation of an analytical standard for chromite.  A. V. Shein and M. V. Mil'kovskaya. <i>Trudy Ural.  Nauk. - Isledovatel. Inst. Geol. Razved. i Issled. Mineral.  Syr'ya</i> 1938, No. 3, 335-54; <i>Khim. Referat. Zhur.</i> 2, No. 1,  67 (1939).—The methods used for analyzing chromite are  described. W. R. Henn</p>																			
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																			
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									

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*Chemistry of Phosphorus*

Use of phosphoric acid for the analysis of minerals and rocks. A. V. BURLIN AND M. V. MILKOVSKAYA. *Zashchita Lest.* 10: 878-82 (1940); *Khim. Referat. Zhur.* 4 [3] 58 (1941).—The authors developed a method for the analysis of chromites, manganese ore, and ferromanganese, using  $H_3PO_4$  for decomposition of the material. For the analysis of chromite, add 0.5 gm. of the sample to a mixture of 10 to 15 ml. of 1.7  $H_3PO_4$  and 5 to 10 ml. of  $H_2SO_4$  and heat to complete decomposition. In the resulting solution, reduce the Fe with  $SnCl_2$  and titrate with  $K_2Cr_2O_7$ . Oxidize the Cr with persulfate and titrate with Mohr's

salt. Oxidize the V with  $KMnO_4$  and titrate with Mohr's salt. For the analysis of manganese ore, treat a 0.1- to 0.5-gm. sample with 15 to 20 ml. of  $H_3PO_4$  (1.7) at  $350^\circ$ , stirring it frequently. In the resulting solution, oxidize the Mn with persulfate in the presence of Na formate and  $AgNO_3$ . Titrate with Mohr's salt, using toward the end Na diphenylaminosulfonate as indicator. The Na formate prevents the separation of  $MnO_2$ . To determine Mn, Cr, and V when they are present together, decompose the sample with  $H_3PO_4$ , dilute with water, treat with persulfate in the presence of  $AgNO_3$  and Na formate, and titrate the sum of these with Mohr's salt. Again oxidize with persulfate, reduce Mn with  $NaCl$ , and titrate Cr + V as before. Oxidize V with  $KMnO_4$ , decompose the excess of the latter with nitrite and urea, and titrate V as before. M.Ho



9

Stabilizing the structure of hardened bearing steel. Va. P. Seliskil and A. S. Shelin. *Vestnik Mashinostroyeniya* 27, No. 2, 31 8(1947).—It was observed that bearing races expanded their dimensions before and even after they were assembled into bearings. The expansion was irregular as to direction. The cause of expansion was traced to the thermal treatment of the steel, particularly to treatment which caused an increase of residual austenite after hardening and tempering. Extensive expts. on the cooling cycle showed that intensification of cooling in the hardening process lowers the residual austenite content and stabilizes the structure of the steel and the dimensions of the work piece. However, lowering the temp. of the cooling medium to intensify the cooling increased the rate of cooling particularly in the region below the beginning of martensitic transformation and caused surface cracking. Slowing down the rate of cooling in the region of the martensite point produced the desired results and prevented cracking. Thus, specimens kept for 10 min. at 80° and then cooled to 20° expanded only 3 μ. Similar results were obtained by keeping at 80° for 2 1/2 hrs.

M. Hume

11173. Stabilization of Structure of Quenched Bearing Steel. By P. Schloska and V. S. Shum. (Transla-  
tion 2691, 7 pages. (From Vestnik Mashinostroyeniya [Bulletin  
of the Machine Construction Industry], v. 27, Feb. 1947, p.  
33-35.)

Describes experiments on the influence of the degree of under-  
cooling in quenching (temperature of quenching medium).  
Effect of repeated cooling after tempering upon stability of the  
retained austenite and on dimensional stability was studied.  
Results are tabulated.

CHEYN, A. S.

Cand Tech Sci

Dissertation: "Influence of the Initial State on the Processes of Phase  
Transformations in Iron and Steel."

24/4/50

Central Sci Res Inst of Technology and Machine Building - "TSNIITMASH."

SO Vecheryaya Moskva  
Sum 71

SHEYN, H. S.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 348 - I

BOOK

Call No.: TN672.V8

Author: SHEYN, A. S. and LEBEDEV, T. A.

Full Title: STRUCTURE AND RESILIENCE OF STEEL TEMPERED AT THE CRITICAL TEMPERATURE INTERVAL

Transliterated Title: Struktura i udarnaya vyazkost' stali, zakalennoy iz kriticheskogo intervala

Publishing Data

Originating Agency: All-Union Scientific Engineering and Technical Society of Machine Builders. Urals Branch

Publishing House: State Scientific and Technical Publishing House of Machine Building Literature ("Mashgiz")

Date: 1950 No. pp.: 12 No. of copies: 3,000

Text Data

This is an article from the book: VSESOYUZNOYE NAUCHNOYE INZHENERNO-TEKHNIЧЕСКОYE OBSHCHESTVO MASHINOSTROITELEY. URAL'SKOYE OTDELENIYE, THERMAL TREATMENT OF METALS - Symposium of Conference (Termicheskaya obrabotka metallov, materialy konferentsii) (p. 166-177), see AID 223-II

Coverage: The author describes the formation of austenite with critical interval of temperatures for pre-and post-eutectoid steels of specific composition (types 30, 40, 15Kh and ShKh15). The effect of the initial state on the process of austenite for-

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SHEYN, A. S.

Metallography

Examination of metallurgical defects by magnetic and metallographic methods.  
Podshipnik no. 2, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, April 1952. Uncl.

LAZARENKO, I. N.; SHEN, A. G.

Bearings (Machinery)

Effect of quality of steel on the functioning of bearings. Podshipnik, No. 4, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, October 1952. Uncl.

[illegible]

CONFIDENTIAL - FRODO

Distribution of micro-hardness in the thin surface layer of polished parts.  
Po'ishnik no. 6, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, October 1952. Uncl.

1. SHEYN, A. S., GORSHKOVA, V. F.
2. USSR (600)
4. Steel
7. Resistance of contact fatigue of ball-bearing steel under various conditions of friction.  
Podshipnik No. 11, 1952
9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.



1. JHEIN, A.
2. USSR (600)
4. Deformations (Mechanics)
7. Effect of original structure and of hardening conditions on changes in the structure and the linear dimensions of ShKh 15 steel, Podshipnik no. 4, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

SHTEINBERG, B. I.; GALKIN, N. A.; SHEYN, A. S.; ZHELUDOV, I. S., Engs.

Peat Industry

Measuring the pressure in operating peat briquette presses. Torf. prom. 30, No. 4, 1953.

SO: Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

AUTHOR: Sheyn, A.S., Candidate of Technical Sciences. 129-12-9/11

TITLE: Influence of the orientation of the fibres on the contact fatigue strength of hardened steel.

(Vliyaniye oriyentirovki volokon na kontaktnuyu ustalostnuyu prochnost' zakalennoy stali)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1957, No.12, pp. 61-66 (USSR)

ABSTRACT: In investigating the mechanical properties of steel usually only one longitudinal direction and one transverse direction relative to the fibres are distinguished. However, in the case of specimens with a rectangular cross section, there are really three possible orientations (one longitudinal and two transverse) of the main stresses relative to the direction of the fibres, as can be seen from the sketches in Fig.1, p.61. Specimens of the ball bearing steel  $\text{X15}$  of 4 x 20 x 60 mm were subjected to bending tests with three different orientations of the fibres relative to the main surfaces. The steel had a considerable carbide layer and was subjected to hardening from 850°C and tempering from 150°C. The microstructure of the steel in the longitudinal direction is illustrated by Fig.2, p.62, and the results, entered in Table 1, p.62,

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129-12-9/11

Influence of the orientation of the fibres on the contact fatigue strength of hardened steel.

indicate that the ratio of the bending strength in the three different directions was 1:0.72:0.56. This is of great practical importance since in a number of cases it is possible to use that transverse orientation which is more favourable from the point of view of stress distribution, this applies particularly to ball bearing races. To determine the influence of the fibre orientation on the life, the fatigue strength was studied of hardened steel  $\text{UX15}$  on two groups of specimens cut from a rod of 90 mm dia. in the direction and transverse to the direction of rolling. The contact fatigue strength was tested on machines of the system of S.V. Pinegin; the active surface of the specimen was in the form of a spheroid and rolled between two rings under load until fatigue chipping occurred on the contact surface. The results graphed in Fig.4, p.64, indicate that one group of the specimens (group a, Fig.3) has a five times higher life than the other group (group b, Fig.3). The obtained results were utilised for studying the possibilities of increasing the life of heavily loaded ball bearings,

Card 2/3 particularly the influence of the macrostructure, and for

69281

SOV/123-59-22-91450

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 22, p 15 (USSR)

8 11 20 252000

AUTHOR: Sheyn, A.S., Tsareva, A.A., Fedotova, V.D., Pavlova, Z.V.

TITLE: Steel Grades for Raceways and Rolling Bodies of High-Temperature Bearings, Their Properties and Heat Treatment

PERIODICAL: Tekhnol. podshipnikostroyeniya, 1958, Nr 17, pp 68 - 88

ABSTRACT: In connection with increasing speeds in machine construction, anti-friction bearings, formerly operating at temperatures of 100 - 120°C, have to operate now at higher temperatures. The temperature range of application of ball bearing steel grades increased up to 300 - 400°C and higher. In this connection the possibility was studied to apply the standard high-speed steel grades R9, R18, RK10, EI-347, and EI-161 for the manufacture of bearing parts. Based on experimental data obtained, the EI-347 grade steel was selected from the number of above-mentioned steel grades. Investigation results are given of the mentioned steel grade, considering its application in ball bearing manufacture. The fundamental criterion in the evaluation of its properties was hot hardness. A deficiency of the EI-347 grade steel is its considerable

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SOV/123-59-22-91450

Steel Grades for Raceways and Rolling Bodies of High-Temperature Bearings, Their Properties and Heat Treatment

carbide heterogeneity (although to a lesser degree than in the steel grades R9 and R18) which appears in large-size cross-sections in the form of a lattice, weakening the structural strength of the bearing parts. In order to obtain a more homogeneous, technologically suitable and cheaper steel, grades with a W-content of 1.3 - 7%, and with an increased (up to 1%) Si-content were investigated. Based on microanalysis and temperature/hardness functions, the compositions of the new ball bearing steel grades V4Kh4MF and V7Kh4F with a 4.5% and 7% W-content and suitable for an operating temperature of 400°C were found. The hot hardness of these steel grades is nearly equal to the hardness of higher alloyed high-speed steels. The new steel grades combine a low degree of alloying with a minimum carbide heterogeneity and a high resistance to heat and wear.

B.A.M.

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Card 2/2

7/15/81 1001 1017/1701 1001/4548

Andreyevskiy avt. SSSR. Komissiya po fiziko-khimiicheskim osnovam proizvodstva stali  
Prikladnyye vkhoda v metallurgiyu (Use of Technia in Metallurgy) Moscow, Izdat-vo  
AN SSSR, 1960. 314 p. Kratka ship inserted. 4,500 copies printed.

sponsoring agency: Akademiya Nauk SSSR. Institut metallurgii i smel't A.A. Baykova...  
Kamenskaya po fiziko-khimicheskim osnovam proizvodstva stali.

Assoc. Ed.: A.M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House G.M. Matrosov; Tech. Ed.: S.G. Markovich.

**PURPOSE:** This collection of articles is intended for technical personnel interested in recent studies and developments of vacuum steeldrawing practices and equipment.

CONTENTS: The book contains information on steel milling in vacuum induction furnaces, steel casting in vacuum, vacuum degassing of molten metal, vacuum annealing, sintering, brazing, welding, and vacuum arc furnaces, reduction processes in vacuum, and degassing of vacuum furnaces and vacuum heating of apparatus and equipment, especially mentioned in connection with some of the articles and will provide a valuable source of information for the reader. Some articles have been translated from English. Some of the English authors are: V. A. Zaslavskiy and I. S. Goltsman, Milling and Pouring of Molten Metals in Vacuum (V. A. Zaslavskiy, I. S. Goltsman, V. A. Abashina, A. P. Malozov and V. P. Zhukhin participated in the work).

**IN THE PROTECTIVE ATMOSPHERE UNDER VACUUM**  
**TRANSFERAL, 1969, and M. A. HOFMEYER, Casting of Oxide-Film-Forming Alloys**

**Melting and Casting in Vacuum and In Protective Atmosphere on the Properties of Titanium Castings**

PHILIPPINEANA, N.Y.      THE EFFECT OF VACUUM MELTING ON THE QUALITY OF 15X25VA STEEL

## PAPER IX. METALLOIDS OF STEEL, AND ALLOYS IN VACUUM AND ATMOSPHERE

Abstracts: See Quinn, A. N., Tracy, and B. V. Pedin. Melting of Re-  
fractory Metals in Vacuum Arc Furnaces

the Properties of Ball-Bearing Steel Remelted in a Vacuum Arc Furnace

**Sequenced: Voters are melting**

## POURING OF STAINLESS STEEL IN VACUUM

copies made of all the letters related to Vietnam

### Vacuum

..... of low-temperature retrochromes by blowing under

### PART III. REDUCTION PROCESSES IN VACUUM

Pentoxide by Carbon in Vacuum. Kinetics of the Reduction of Niobium

[illegible]

Director, Institute of Iron Metallurgy in  
Department of Petrochemicals in Yuzovka

S/137/62/000/012/041/085  
A006/A101

AUTHORS: Sheyn, A. S., Tsareva, A. A., Medotova, V. D.

TITLE: Low-alloy heat-resistant steels for antifriction bearings and instruments

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 68, abstract 12I403 ("Tr. Vses. n.-i. konstrukt. tekhnol. in-ta podshipnik, prom-sti", 1960, no. 2; (22) 102 - 120)

TEXT: The authors investigated the structure and the most important properties of new low-alloy heat resistant steels of type B4X4MΦ (V4Kh4MF) 0.65% C. They determined the effect of the quenching and tempering temperature, the number of tempering processes upon the hardness of type 3H944 (EI944) and 3H945 (EI945) steels. The authors studied furthermore the changes in size during heat treatment; stabilization of the structure and size, hot hardness and creep resistance; strength properties during tensile tests, torsion and impact bending; and the magnitude of contact endurance of (EI944) and (V7Kh4F) (EI945) steels, containing 0.75 and ... (?) [Abstracter's remark: omission]. The investigation

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Low-alloy heat-resistant steels for...

S/137/62/000/012/041/085  
A006/A101

methods are described. It is shown that low-alloy type EI944 steel has a lesser carbide heterogeneity, in particular in large sections, and better general mechanical properties, than high-speed steel, and a relatively high heat resistance. The steel is recommended for the manufacture of bearings intended to operate at temperatures up to 400 - 450°C, and for dies.

G. Rymashevskiy

[Abstracter's note: Complete translation]

Card 2/2

S/276/63/000/003/002/006  
A004/A127

AUTHORS: Sheyn, A. S., Tsareva, A. A., Kabanov, M. F., SinitSYna,  
T. V.

TITLE: Stainless steels for bearings intended for operation at  
elevated temperatures

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no. 3,  
1963, 58, abstract 3B248 ("Tr. Vses. n.-i. konstrukt.-tekh-  
nol. in-ta podshipnik, prom-sti", 1960, no. 4, (24), 3 - 14)

TEXT: Hardness tests were carried out after tempering at tempera-  
tures in the range of from 120 to 550°C. Heat tests were performed in  
the temperature range of 20 - 500°C, testing the notch toughness, hard-  
ness and scale resistance at long-time holding. Dimensional changes were  
tested at maximum operating temperatures, while the corrosion resistance  
was tested in aggressive media (5% HNO<sub>3</sub> solution, alternative dipping;  
5% NaCl solution, alternative dipping). As a result of testing eight  
alloys it was found that, for the manufacture of bearings operating at  
temperatures of up to 400°C, it is expedient of using the 18 (Kh18) steel.

Card 1/2

Stainless steels for bearings .....

S/276/63/000/003/002/006  
A004/A127

The following heat treatment is recommended: Preheating up to 850°C final heating (in a salt bath) up to 1,150°C, 20 sec holding per 1 mm of cross section; heating in an electric furnace with air atmosphere up to 1,070 - 1,100°C, 1 - 1.5 minutes holding per 1 mm of cross section, cold treatment (slow cooling of the components down to -70 - 80°C, holding at -70°C for 30 - 60 minutes, heating up to the shop temperature in the air), one single tempering at 400°C for 5 hours. For the manufacture of bearing parts operating at temperatures from -200 to +100°C, a steel is recommended which, in comparison with the Kh18 grade steel, has a higher C-content. After cold treatment and tempering at 120°C, a hardness of HRC 63 - 64 could be obtained. For manufacturing heat-resistant bearings, operating in an oxidizing atmosphere and in media containing NaCl, 9M928 (EI928) steel can be used. There are 15 figures.

T. Kislyakova

[Abstracter's note: Complete translation]

Card 2/2

BAYKOV, S.P., kand. tekhn. nauk; BELENKO, I.S., kand. tekhn. nauk;  
 BELKOV, S.F., inzh.; BELYANCHIKOV, M.P., inzh.; BERNSHTEYN,  
 I.L., inzh.; BOGORODITSKIY, D.D., inzh.; BOLONOVA, Ye.V.,  
 kand. tekhn. nauk; BROZGOL', I.M., kand. tekhn. nauk;  
 VLADIMIROV, V.B., inzh.; VOLKOV, P.D., kand. tekhn. nauk;  
 GERASIMOVA, N.N., inzh.; ZHUKHOVITSKIY, A.F., inzh.;  
 KABANOV, M.F., inzh.; KAREVTSOV, V.M., kand. tekhn. nauk;  
 KOLOTEKHNOV, I.V., inzh.; KONDRAT'YEV, I.M., inzh.;  
 KUZNETSOV, I.P., kand. tekhn. nauk; L'VOV, D.S., kand.  
 tekhn. nauk; LYSENKO, I.Ya., kand. tekhn. nauk; MAKAROV,  
 L.M., inzh.; CLEYNIK, N.D., inzh.; RABINER, Ye.G., inzh.;  
 ROZHDESTVENSKIY, Yu.L., kand. tekhn. nauk; SAKHON'KO, I.M.,  
 kand. tekhn. nauk; SIDOROV, P.N., inzh.; SPITSYN, N.A., prof.,  
 doktor tekhn. nauk; SPRISHEVSKIY, A.I., kand. tekhn. nauk;  
 CHIRIKOV, V.T., kand. tekhn. nauk; SHEYN, A.S., kand. tekhn.  
 nauk; NIBERG, N.Ya., nauchnyy red.; BLAGOSKLONOVA, N.Yu., inzh.,  
 red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Antifriction bearings; manual] Podshipniki kachenia; spravochnoe posobie. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroita. lit-ry, 1961. 828 p. (MIRA 15:2)  
 (Bearings (Machinery))

VINOGRAD, M.I., kand.tekhn.nauk; GONCHARENKO, M.S., inzh. [deceased];  
DORONIN, V.N., inzh.; TOFILIN, V.V., inzh.; CHERNINA, B.G., inzh.;  
Prinimali uchastiye: SHEYN, A.S., kand.tekhn.nauk; GORSKIY, V.N.,  
inzh.; ARKHIPOVA, V.P., inzh.; LAGUNTSOVA, Ye.V., inzh.;  
KISELEVA, S.A., inzh.; RYBAKOVA, V. Ya., inzh.; BYSTRIKOVA, I.N.,  
tekhnik; BURDYUCHKINA, Ye.P., tekhnik; SOLODIKHIN, I.P., tekhnik.

Improving the process of making EI347 steel for bearings.  
Stal' 21 no.6:543-546 Je '61. (MIRA 14:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy  
metallurgii i zavod "Elektrostal'."  
(Bearing metals)

RAUZIN, Ya.R., doktor tekhn. nauk; Prinsipal uchastiye SPEKTOR, A.G.,  
kand. tekhn.nauk; ~~SHEYN, A.S.~~, kand. tekhn.nauk, retsenzent;  
KUNIN, P.A., inzh., red.; MODEL', B.I., tekhn. red.

[Heat treatment of chromium steel; for bearings and tools]  
Termicheskaya obrabotka khromistoi stali; dlia podshipnikov  
i instrumentov. Izd.2., perer. i dop. Moskva, Mashgiz, 1963.  
383 p. (MIRA 16:8)

(Chromium steel—Heat treatment)

L 20121-65 EMG(j)/EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWA(d)/EPR/EPA(w)-2/  
EPA(bb)-2/EWP(b)/EWP(t) Pq-l/Pr-l/Ps-l/Pt-10/Pu-l/Pab-10/Pad IJP(c) WH/WW/  
M/M/HW/DJ  
ACCESSION NR: AR4044544 S/0277/64/000/006/0025/0025

SOURCE: Ref. zh. Mashinostr. mat., konstr. i raschet detal. mashin. Otd. vy\*p.,  
Abs. 18.155

JTHOR: Sheyn, A. S., Tsareva, A. A., Fedotova, V. D. B

TITLE: A study of pyroceramics <sup>10</sup>

CITED SOURCE: Tr. Vses. n.-i. konstrukt. tekhnol. in-ta podshipnik. prom-sti,  
M., 1963, 57-64

APPC TAGS: ball thrust bearing, pyroceramic bearing, metallic alloy bearing, pyro-  
ceramic ball test, pyroceramic ball porosity, pyroceramic ball life

TRANSLATION: <sup>11</sup> The study concerned pyroceramic materials for races and rollers of  
bearings working in aggressive environments and at high temperatures. Tests were made  
on disk-shaped samples (diameter-26 mm, height 3 mm) burnished for 1 hour on a 4-ball  
machine at temperatures of 20 to 900C (load 30 kg, molybdenum disulfide lubrication,  
argon atmosphere). Results of the study of various pyroceramics, differing in composi-  
tion, heat treatment and ratio of vitreous to crystalline phases, established that products  
of group Zh exhibit the best high-temperature strength at loads corresponding to apparent  
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L 20121-65

ACCESSION NR: AR4044544

contact stress  $\sigma_{\max}$  of 23,000 kg/cm<sup>2</sup>. Best workability in roiling is attained with the pair "metallic high strength pyroceramic or metalloceramic alloy". It is recommended that bearings be manufactured with races of metallic alloys and balls of pyroceramic. Tests on experimental lots of ball thrust bearings of type 8305, with races of heat resistant nickel alloy EI607 and pyroceramic balls, were carried out at 500 and 700C, under loads corresponding to apparent stresses  $\sigma_{\max}$  of 12,000 kg.cm<sup>2</sup>, 1000 rpm, in argon with graphite powder lubrication and in air without lubrication. Results demonstrated that the low contact life of the balls (from 50 min. to 5 hrs.) is due to substandard quality of the material (i.e. pores, cavities) and its high brittleness. A need is noted for developing the technology of manufacture of balls from non-porous and homogeneous pyroceramics.

SUB CODE: MT

ENCL: 00

Card

2/2



L 6709-65 EWT(m)/EFF(c)/EPR/T/EPA(bb)-2/ENP(q)/ENP(b) Fr-4/Pad/Pa-4 ASD(m)-3

MJW/BW/JD/HW/DJ

ACCESSION NR: AR4044230

S/0137/64/000/006/1073/1073

69  
65

SOURCE: Ref. zh. Metallurgiya, Abs. 61417

AUTHOR: Sheyn, A. S.

TITLE: Heat-resistant, heat-resisting and rust-resistant alloys for the parts of anti-friction bearings

CITED SOURCE: Tr. Vses. n.-i. konstrukt.-tekhnol. in-ta podshipnik. prom-sti, no. 3(35), 1963, 60-69

TOPIC TAGS: alloy, antifriction bearing, heat resistance, rust resistance, heat resistant alloy

TRANSLATION: A survey of alloys for parts of anti-friction bearings working at different temperatures. Steel ShKh-15, alloyed with different elements, works up to 200°-300°. For temperatures of 250-500° there are created steels of the type used for highspeed cutting: tungsten, molybdenum, tungsten-molybdenum; for temper-

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L 6709-65

ACCESSION NR: AR4044230

atures of 650°-700° Co-alloys are used. On a base of steel 9Kh18 for anti-friction rings and elements for<sup>27</sup> operation to 300-540° there have been created heat-resistant steels with Mo, Co, Ni, Be, Ti, W and V. For separators of heat-resistant and heat-resisting bearings are used bronze<sup>18</sup> to 300° and Monels<sup>18</sup> (Ni-Cu-Fe-alloys) to 500°; for anti-friction rings and elements for operation from -60° to +500°, steel EI347Sh is used. The magnitude of the contact strength of heat-resistant steels (R18, V7, R9, EI347, and EI161) increases with an increase in the cleanness of the steels and a lowering of the number of defects in them. Notes the influence of the location of metal fibers with respect to the working surface on the contact strength of steels. Gives data on creep strength and on the hardness of various heat-resistant steels. There are developed, for use during large shock and vibration loads, low-alloy and heat-resistant highly durable steels ( $\sigma_k$  15-20 kg/cm<sup>2</sup> at a test temperature of 200-400°), and also heat-resisting anti-friction bearings for use at temperatures to 800-1000°. The new heat-resisting alloys at 900 and 980° have prolonged load capacity, approximately identical with that of balls made from steel ShKh15 at 200-220°, and static loads corresponding to identical initial contact stresses ( $\sigma_{max} \sim 80,000$  kg/cm<sup>2</sup>). The deformation of balls made from the new heat-

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ACCESSION NR: AR4044230

resisting alloy, after a test with oscillatory motion ( $\sigma$  max 40,000 kg/cm<sup>2</sup>,  
time of test: 2 hours), is 0.10 - 0.15% at a test temperature of 800-1000°.  
Ten illustrations.

SUB CODE: MM, TD

ENCL 00

Card 3/3

SHEYN, G., elektromekhanik (Kherson)

Modernization of the electric equipment of "Gants" 5-ton gantry  
cranes. Mor.flot' 17 no.2:24-25 F '57. (MLRA 10:3)  
(Cranes, derricks, etc)

TROYANOV, I.A.; BEKHER, R.M.; KRAYUKHINA, N.N.; SHEYN, I.A.; MYSHKINA, N.P.

Sorption removal of organic substances from waste waters. Khim.  
nauka i prom. 2 no.5:672 '57. (MIRA 10:12)

1. Rubezhanskiy filial nauchno-issledovatel'skogo instituta  
poluproduktov i krasiteley.

(Sewage--Purification)  
(Sorption)

SHWYN, I.I.

Organizing efficiently the collection of waste products. Leg.  
prom. 14 no.6:9 Jo '54. (MIRA 7:8)  
(Leather industry--By-products)

SHEYN, Ivan Vasil'yevich; KHILYAKOVA, O., red.

[With the aid of science] V druzhbe s nauкой. Simferopol',  
Izd-vo "Rym," 1964. 36 p. (MIR: 18:10)

SHEYN, M.A.

Notes on Bordieva's and Frank's reactions for determining bilirubin in the urine. Lab. delo 8 no.3:26 Mr '62. (MIRA 15:5)

1. Saratovskaya gorodskaya klinicheskaya bol'nitsa No.2.  
(BILIRUBIN) (URINE--ANALYSIS AND PATHOLOGY)



OVCHARENKO, Valentina Semenovna; MILOV, Aleksandr Pavlovich; ~~SHEYN~~,  
~~Mikhail Kuz'mich~~; NOVOZHILOVA, Pobeda Semenovna; OSIPOV,  
M.I., red.; KOTLYAR, E.S., red.; DORODNOVA, L.A., tekhn.red.

[Training construction workers] Podgotovka rabochikh-stroitelei.  
Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 34 p.  
(MIRA 13:11)

(Building trades--Study and teaching)

SHEYN, Nikolay Vasil'yevich; UL'YANOVSKIY, R., otv. red.; FILIPPOVA, E.,  
red. 1zd-va; LEBEDEV, A., tekhn. red.

[State finances of India] Gosudarstvennye finansy Indii. Mo-  
skva, Gosfinizdat, 1961. 209 p. (MIRA 15:2)  
(India--Finance)

SHEYN, P.A.

Material lno-Tekhnicheskoye  
Snabzheniye Tekstilnoy Promy-  
shlennosti, Material Technical  
Supply of the Textile industry, Moskva, Gizlegprom. 1945  
134 p. illus.  
"Litature": p. 136

At head of title Vsesoyuznyy  
Uchebnyy Kombinat Markomtekstilya  
SSSR.

SHEIN, PAVEL ABRAMOVICH

Material'no-tekhnicheskoe snabzhenie mashinostroitel'nykh zavodov. Moskva, Mashgiz, 1947. 219 p. illus.

Materials and engineering supplies for machine-building plants.

DLC: TS155.S444

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SHEYN, P.A.; KURSKIY, A., redaktor; PODGORNOVA, V., redaktor; PIOTROVICH, M.,  
tehnicheskiiy redaktor

[Supplying a socialist industrial enterprise with technical materials]  
Material'no-tehnicheskoe snabzhenie sotsialisticheskogo promyshlen-  
nogo predpriatiia. Moskva, Gos. izd-vo polit. lit-ry, 1954. 359 p.  
(Materials) (MLRA 8:3)

SHEYN, Pavel Abramovich; FALALEYEVA, T.F., redaktor; GUBIN, M.I., tekhnicheskii redaktor.

[Organization of material and equipment supply in socialist industrial enterprises] Organizatsiia material'no-tekhnicheskogo snabzheniia sotsialisticheskogo promyshlennogo predpriiatiia. Moskva, Izd-vo "Znanie," 1957. 46 p. (Vsesoiuznoe obshchestvo po rasprostraneniuiu politicheskikh i nauchnykh znani. Ser.3, no.20) (MIRA 10:11)  
(Industrial management) (Materials)

SHEYN, Pavel Abramovich; LYUBOVICH, Yu., red.; CHEKHUTOVA, V., red.;  
TROJANOVSKAYA, N., tekhn.red.

[The supply of materials and equipment for socialist industrial enterprises] Material'no-tekhnicheskoe snabzhenie sotsialisticheskogo promyshlennogo predpriiatiia. Izd.2., perer. Moskva, Gos.izd-vo polit.lit-ry, 1959. 365 p. (MIRA 12:11)  
(Industrial procurement)

SHEYN, Pavel Abramovich; GORELIK, L.V., otv. red.; SIDOROVA, T.S., red.;  
SLUTSKIN, A.A., tekhn. red.

[Organizing and planning the supply of materials and equipment in  
the communications industry] Organizatsiia i planirovanie material'-  
no-tekhnicheskogo snabzheniia v khoziaistve sviazi. Moskva, Gos. izd-  
vo lit-ry po voprosam sviazi i radio, 1961. 27 p. (MIRA 14:11)  
(Telecommunication--Equipment and supplies)



SHEYN, Pavel Abramovich; KOMAROVA, T.F., red.; RAKITIN, I.T., tekhn.red.

[Potentials for saving material resources] Rezervy ekonomii material'nykh resursov. Moskva, Izd-vo "Znanie," 1961. 44 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh i nauchnykh znani. Ser.3, Ekonomika, no.13)

(MIRA 14:6)

(Efficiency, Industrial)

VISHNEVSKIY, A.A., doktor ekonom. nauk, prof.; PODGORODETSKIY, I.A., prof.;  
SERGEYCHUK, K.Ya., kand. tekhn. nauk; SOLOVEYCHIK, L.M., kand.  
ekonom.nauk; TOCHIL'NIKOV, G.M., kand. ekonom. nauk; ~~SHEYN, P.A.,~~  
prepodavatel'; TRIFONOV, V.I., red.; ROMANOVA, S.F., ~~ekonom. red.~~

[Economics of the communication system] Ekonomika svyazi. Moskva,  
Gos. izd-vo lit-ry po voprosam svyazi i radio, 1961. 279 p.

(MIRA 14:8)

(Communication and traffic)

SHEYN, Pavel Abramovich; SMIRNOV, Ye.I., red.; PONOMAREVA, A.A.,  
tekhn. red.

[Potentials for economizing material resources in industry]  
Rezervy ekonomii material'nykh resursov v promyshlennosti.  
Moskva, Ekonomizdat, 1963. 119 p. (MIRA 16:7)  
(Industrial management)

SHEYN, P.N.

Determining the optimal period for constant gas production and the total number of wells in a gas pool. Gas. ~~delo no:3:13-22~~  
'63. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza.

32-12-7/71  
AUTHORS: Portnov, K.A., Sheyn, S.L.

32-12-7/71

TITLE: The Application of the Potentiometric Method of Titration When Determining the Free Alkalies in Phenol Solutions and Melts of Aromatic Sulpho-Acids (Izmeneniye potentsiometricheskogo metoda titrovaniya pri opredelenii svobodnoy shchelochi v rastvorakh fenolov i plavakh aromaticheskikh sul'fo kislot).

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 12, pp. 1417-1420 (USSR)

ABSTRACT: In the introduction the importance of the determination of the free alkali in the solutions is stressed in this paper, as in certain cases this determination is decisive for finishing of the reaction; in other cases certain solutions must not contain a high content of free alkalis. The respective methods developed by Spitsyn and Markus (refractometric methods) and by Kargin and Usanovich (with application of platinum electrodes) are referred to in this paper. Examination of the conditions for the potentiometric determination of the free alkali in the melts of monosulphoacids of benzene and naphthalene by titration of the corresponding solution by means of an antimony electrode is the task of this paper. Proceeding from the fact that 3 naphthol and phenol are weak acids, it is assumed that the  
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pH(C.I.-m) determination can be carried out by the following formula:

The Application of the Potentiometric Method of Titration  
When Determining the Free Alkalis in Phenol Solutions and  
Solutions of Aromatic Sulpho Acids

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$pH = \frac{1}{2} pK_{a1} + \frac{1}{2} pK_{a2} + \frac{1}{2} \lg c$ . If  $pK_{a1} = 9,6$ , then the value for  
 $pH \approx 11,3$  is here obtained for naphtolate and, somewhat higher, for  
phenolate (at  $pK_{a1} = 9,9$ ). If therefore a naphtolate- or phenolate-  
solution is titrated with a free alkali content of up to  $pH = 11$ ,  
the free alkali alone is obtained. If it is assumed that the degree  
of discharge of 1-naphtol is = 99,99%, the naphtolate solution has  
to be titrated up to  $pH \approx 5$ , because  $pH = pK_{a1} - 4 = 9,6 - 4 = 5,6$ . It is  
on this fact that the method mentioned was based (an example of the  
application of this method is given). In conclusion it is pointed  
out that this method corresponds to the conditions prevailing in  
practice and that it permits an accuracy of up to  $\pm 5\%$ . There are  
3 figures, 2 tables, and 4 Slavic references.

ASSOCIATION: Branch of the Institute for Organic Semifinished Products and Dyes  
(Filial instituta organicheskikh poluproduktov i krasiteley).

AVAILABLE: Library of Congress

Card 2/2 1. Phenol solutions-Alkalis determination 2. Titration-Potentiometric  
method-Application 3. Monosulfoacids-Benzene

VOROZHTSOV, N.N., ml.; SHEYN, S.M.

Interchange reaction of sulfo and hydroxyl groups in aromatic series. Part 1: Study of the exchange kinetics of the sulfo group in the sodium salt of  $\beta$ -naphthalenesulfonic acid and the hydroxyl group. Ukr. khim. zhur. 24 no. 2:208-212 '58. (MIRA 11:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley im. K.Ye. Voroshilova, filial v g. Rubezhnoye.  
(Naphthalenesulfonic acid)  
(Chemical reaction, Rate of)

VOROZHTSOV, H.N., ml. ; SHEYN, S.M.

Interchange reaction of sulfo and hydroxyl groups in aromatic series, Part 2: Study of the exchange kinetics of the sulfo group and the hydroxyl group in the sodium salts of 2,6- and 2,7-naphthalenedisulfonic acids. Ukr. khim. zhur. 24 no. 2:213-216 '58.  
(MIRA 11:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley im. K.Ye. Voroshilova, filial v g. Ruzhnoye.  
(Naphthalenedisulfonic acid)  
(Chemical reaction, Rate of)



SHEYN, S.M.; VOROZHTSOV, N.N., ml.

Exchange reaction between a sulfo group and an oxy group in the aromatic series. Part 3: Investigation of the kinetics of the reaction of sodium salts of 2,6- and 2,7-naphtholsulfonic acids with sodium hydroxide solutions. Ukr.khim.zhur. 24 no.5:643-647 ' 58.

(MIRA 12:1)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley imeni K.Ye. Voroshilova, filial v g. Rubezhnoye.  
(Naphtholsulfonic acid) (Sodium hydroxide)  
(Chemical reaction, Rate of)

SHEYN, S.M.; VOROZHTSOV, N.N., ml.

Reaction of the substitution of sulfo groups by oxy groups in the aromatic series. Part 4: Investigation of kinetics of the reaction of sodium salt of 1,5-naphthalenedisulfonic acid and 1,5-naphthalenedisulfonic acid with sodium hydroxide solutions. Ukr.khim.zhur. 24 no.6:757-760 '58. (MIRA 12:3)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley im. K. Ye. Voroshilova, filial v.g. Bubezhnoye.  
(Naphthalenedisulfonic acid) (Sodium hydroxide)  
(Chemical reaction, Rate of)

RYKLIS, S.G.; SHEYN, S.M.

Continuous-process condensation of chloral with chlorobenzene.  
Zhur. prikl.khim. 31 no.7:1114-1118 J1 '58. (MIRA 11:9)

1. Kafedra organicheskogo sinteza Kiyevskogo ordena Lenina  
politekhnicheskogo instituta.

(Condensation products (Chemistry)) (Chloral) (Benzene)

SHEYN, S. M., Cand Chem Sci (diss) -- "The exchange of a sulfo group for a hydroxy group in the naphthalene series". Khar'kov, 1959. 14 pp (Min Higher and Inter Spec Educ Ukr SSR, Khar'kov Order of Labor Red Banner State U im A. M. Gor'kiy), 150 copies (KL, No 10, 1960, 126)

5(1)

SOV/64-59-3-8/24

AUTHORS: Plakidin, Vl. L., Sheyn, S. M.

TITLE: Reactions of Sodium Salts of the  $\beta$ -Naphthalene-sulphonic Acid With a Solution of Caustic Soda (Vzaimodeystviye natriyevoy soli beta-naftalinsul'fokisloty s rastvorom yedkogo natra)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 3, pp 32 - 34 (USSR)

ABSTRACT: The reaction mentioned in the title is of special importance for developing a continuous method of producing  $\beta$ -naphthol (I). Since publication data in this connection are very insufficient (Refs 1-5) the kinetics of this reaction was examined which took place between a 99.5% sodium- $\beta$ -naphthalene sulfonate (II) and NaOH solutions with concentrations of 20, 30, and 40%, at temperatures of 300-390° (and the corresponding atmospheric pressures of 100-200). The influence of the NaOH amount and the admixtures of  $\text{Na}_2\text{SO}_4$  and  $\text{Na}_2\text{CO}_3$  to pure (II) was also examined. The reaction was carried out in a 45 liter autoclave according to a method already described (Ref 6). A diagram (Fig 1) shows that the output of (I) rises to a maximum at

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Reactions of Sodium Salts of the  $\beta$ -Naphthalene-sulphonic SOV/64-59-3-8/24  
Acid With a Solution of Caustic Soda

temperatures above  $340^{\circ}$  and then decreases indicating a counter-reaction (transformation of (I) into other products). Up to a certain degree of the transformation, a linear function of the (I) output of the NaOH concentration can be observed (Fig 5). An increase of the NaOH excess leads to an increase of the (I) output, and the output with an excess of 10% and a reaction time of 30-40 minutes amounts to 90-92% and to 94-95% in case of a 75% excess.  $\text{Na}_2\text{SO}_4$  and  $\text{Na}_2\text{CO}_3$  added to (II) in amounts of 5-8% do not effect the output or quality of the product. There are 5 figures and 6 references, 2 of which are Soviet.

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VOROZHTSOV, N.N., mladshiy; SHEYN, S.M.

Exchange of a sulfonic group for a hydroxy group in the aromatic series. Part 5: Kinetics of the reactions between a sodium hydroxide solution and the sodium salts of 1-naphthalenesulfonic acid and 2-methyl-6-naphthalenesulfonic acid. Ukr. khim. zhur. 26 no.3:341-346 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley, filial v g.Rubezhnom.  
(Naphthalenesulfonic acid ) (Sodium hydroxide)

VOROZHTSOV, N.N.; SHEYN, S.M. ....

Reaction involving the exchange of a sulfo-group for a hydroxyl group in the aromatic series. Part 6: Cleavage of  $\beta$ -naphthol in the course of the alkaline fusion of sodium  $\beta$ -naphthalenesulfonic acid. Ukr. khim. zhur. 26 no.4:490-495 '60. (MIRA 13:9)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley im. K.Ye. Voroshilova, filial v g.Rubezhnom.  
(Naphthol) (Naphthalenesulfonic acid)



SHEYN, S.M.

Reactions of sodium salts of naphthalenesulfonic acids with  
solutions of alkalis. Khim. prom. no. 2:109-112 F '61. (MIRA 14:4)  
(Naphthalenesulfonic acid) (Alkali)

BEKHER, P.M.; KOGANOVSKIY, A.M.; KRAYUKHINA, N.N.; MYSHKINA, N.P.; TARAN,  
P.N.; TROYANOV, I.A.; SHEYN, S.M.

Adsorption removal of aromatic compounds from the waste waters of  
aniline dye production. Ukr. khim. zhur. 27 no.2:268-273 '61.  
(MIRA 14:3)

1. Institut obshchey i neorganicheskoy khimii AN USSR i Rube-  
zhanskiy filial Nauchno-issledovatel'skogo instituta organi-  
cheskikh poluproduktov i krasiteley.

(Salvage(Waste, etc))  
(Aromatic compounds)

TROYANOV, I.A.; SHEYN, S.M.; IGNATOV, V.A.

Preparation of 2,4,5-trichlorophenol by the saponification of 1, 2,  
4,5-tetrachlorobenzene in a methyl alcohol medium. Khim. prom.  
no.3:213-214 Mr '61. (MIRA 14:3)  
(Phenol) (Benzene)

GERASTIENKO, Yu.Ye.; SHEYN, S.M.; BAKULINA, G.G.; CHEREPIVSKAYA, A.P.;  
SEMEYUK, G.V.; YAGUPOL'SKIY, L.M.

Thioindigoid dyes. Part 9: Thioindigoid dyes containing fluorine.  
Zhur.ob.khim. 32 no.6:1870-1874 Je '62. (MIRA 15:6)  
(Thioindigo)

SHEYN, S.M.; IGNATOV, V.A.

Nucleophilic substitution in the aromatic series. Part 1:  
Mechanism of the interaction of 1,2,4,5-tetrachlorobenzene  
with sodium methylate in anhydrous and aqueous methyl  
alcohol. Zhur.ob.khim. 32 no.10:3220-3222 O '62.(MIRA 15:11)  
(Benzene)  
(Sodium alcoholates)

SHEYN, S.M.; IGNATOV, V.A.

Nucleophilic substitution in the aromatic series. Part 2:  
Kinetics of the reaction of 1,2,4,5-tetrachlorobenzene  
with sodium methylate in anhydrous methyl alcohol.  
Zhur.ob.khim. 32 no.10:3223-3227 0 '62. (MIRA 15:11)  
(Benzene)  
(Sodium alcoholates)

SHEYN, S.M.

Nitrodiphenylamines with trifluoromethyl and trifluoromethylsulfonyl groups. Zhur.prikl.khim. 35 no.11:2582-2584 N '62. (MIRA 15:12)  
(Diphenylamine)

DOKUNIKHIN, N.S.; SHEYN, S.M.; BOGUSLAVSKAYA, I.L.

Interaction of 1,4- and 2,3-fluorochloroanthraquinones  
with a solution of ammonia. Zhur. VKHO 8 no.5:594-595 '63.  
(MIRA 17:1)

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produktov i krasiteley.



SHEYN, S.M.; GOLOMB, L.M.; KARPOV, V.V.

Dyeing properties of derivatives of nitrodiphenylamine containing trifluoromethyl and trifluoromethylsulfonyl groups. Ukr. khim. zhur. 29 no.7:738-740 '63. (MIRA 16:8)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley, filial v g. Rubezhnoye.  
(Diphenylamine) (Dyes and dyeing)

SHEYN, S.M.; IGNATOV, V.A.

Nucleophilic substitution in the aromatic series. Part 3:  
Kinetics and mechanism of the reaction of 1,2,4,5-tetra-  
chlorobenzene with sodium ethylate in anhydrous alcohol.  
Zhur. ob. khim. 33 no.8:2645-2650 Ag '63.

Nucleophilic substitution in the aromatic series. Part 4:  
Kinetics and mechanism of the reaction of 1,2,4,5-tetra-  
chlorobenzene with sodium alcoholates in an alcohol medium.  
2667-2672

Nucleophilic substitution in the aromatic series. Part 5:  
Kinetics of the reaction of 1,2,4,5-tetrachlorobenzene  
with sodium alcoholates in a water-alcohol medium.  
2690-2697 (MIRA 16:11)

DOKUNIKHIN, N.S.; SHEYN, S.M.; BOGUSLAVSKAYA, I.L.

Derivatives of anthraquinone. Part 4: Color and structure of 1-amino-2-benzoylanthraquinone and 7,8-phthaloylacridone derivatives. Zhur. ob. khim. 34 no. 5:1565-1569 My '64.  
(MIRA 17:7)

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SHEYN, S.M.; KRASNOSEL'SKAYA, M.I.

Nucleophilic substitution in the aromatic series. Part 6: Mechanism of interaction of 2-chloro-1,4-bis(trifluoromethyl)benzene with alcoholates in alcohol medium. Zhur. ob. khim. 34 no.10:3385-3389 0 '64. (MIRA 17:11)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley, filial v g. Rubezhnoye.

SHEN, S.L.; KOKOREZ, L.A.

Reaction of o-nitrochlorobenzene with an ammonia solution. Ukr.  
khim. zhur. 30 no.12:1332-1334 1964 (NIRA 18:2)

L. Kharkovskiy filial Nauchno-Issledovatel'skogo Instituta or-  
ganicheskikh poluproduktov i krasitel'nykh.

YU. GIL', L.N.; SHAY, S.I.; CHEN, A.K.; V. BALIN, A.V.

Fluorine-containing 2-pyridylmethyl-4,4'-bipyridines. Zhur.  
prikl. khim. 37 (1964) 11-15.

(MIR 15:3)

A. Kubenskiiy filial nauchno-issledovatel'skogo instituta organicheskikh polupr. i krasitel'nykh.

YAGUPOL'SKIY, L.M.; SHAYN, S.M.; KRASHOSEL'SKAYA, M.I.; SOLODUSHENKOV, S.Y.

New method for the preparation of 2-amino-4-trifluoromethylbenzoic acid. Zhur. ob. Khim. 35 no.7:1261-1265 31 '65.

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KRASNOSEL'SKIY, V.N.; BOBITYANSKIY, I.M.; SHEYN, S.M.; GALINKER, I.S.

Conductometric analysis method for the control of alkali melting of the salts of aromatic sulfo acids. Khim. prom. 41 no.5:384-385 My '65. (MIRA 18:6)

1. Rubezhanskiy filial Nauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley.



174, A.M., 1964, 1.1. 1964, A.M., 1964

On account of structural bond cleavage by the amine group.  
Part 10: Reaction of tri- and tetrafluorobenzotrifluoride,  
1,4-bis-(trifluoromethyl)-benzene, and  
1,2-bis-(trifluoromethyl)-benzene with an aqueous  
solution of ammonia. Izv. v AN SSSR no.7 Ser. Khim. nauk  
no.2:85-89 '64. (MIRA 18:12)

L. Novosibirskiy institut organicheskoy khimii Sibirskogo  
otdeleniya AN SSSR. Submitted June 23, 1964.

IGNATOV, V.A.; SHEYN, S.M.

Nucleophilic substitution in the aromatic series. Part 8:  
Kinetics of decomposition of anisole and its chloro  
derivatives by sodium methylate in an alcohol medium.  
Zhur. org. khim. 1 no.11:1951-1955 N '65. (MIRA 18:12)

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otdeleniya AN SSSR. Submitted October 21, 1964.

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Synthesis of 4-substituted 1,3-bis-(trifluoromethylsulfonyl)-benzenes. Zhur.VKHO 10 no.5:592 '65.

(MIRA 18:11)

I. Novosibirskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR, i Rubezhanskiy filial Nauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley.

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Preparation of 1-amino-2-acyl-4-aryl aminoanthraquinones.  
Zhur.VKHO 10 no.5:596-597 '65.

(MIRA 18:11)

1. Nauchno-issledovatel'skiy inatitut organicheskikh polupro-  
duktov i krasiteley, filial v gorode Rubzhnoye.

SHEYN, T.I

Effect of polymer chain structure on the properties of

samples of fibers

3

11006

The effect of the structure of the polymer chain on the properties of the fibers is studied. The results are compared with the data obtained from the study of the properties of the fibers of the same type. The results are compared with the data obtained from the study of the properties of the fibers of the same type. The results are compared with the data obtained from the study of the properties of the fibers of the same type.

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RSC

STREPIKHAYEV, A.A.; TOPCHIBASHEVA, V.N.; SHEYN, T.I.

A new polyamide fiber, enant. Tekst.prom.16 no.1:33-34 Ja '56.  
(Nylon) (MIRA 9:4)

ULYAN, I. I., IMENITASHOVA, V. N., GABACHEVA, V. S., FAYNBERG, E. S., MIKHAYLOV, N. V.

"Thermodynamic studies of the molecular structure of synthetic polyamides,"  
a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers,  
20 Jan-2 Feb 57, Moscow, Fiber Research Inst.

B-3,684,395

AUTHORS: Kudryatsev, G. I., Sheyn, T. I., 64-58-3-8/20  
Batik'yan, B. A.

TITLE: The New Polyamide Type Fiber "Kapronant" (Novoye volokno poliamidnogo tipa "kapronant")

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 3, pp 29-32 (USSR)

ABSTRACT: The collectives of the Institute for Element-Organic Compounds of the Academy of Sciences, USSR, of the GIAP, and of the Moscow Electrolysis Works developed an industrial method of synthesizing amino-enanthic acid and other higher amidocarboxylic acids, thus causing an increase of the raw material basis for the production of polyamide fibers. The present paper describes investigations of copolymers on the basis of amino-enanthic acid and capro-lactam in different properties of weight; the experimental investigations were made in co-operation with L.N. Vlasova. The investigations were made in open ampoules, in nitrogen atmosphere at 260° and in 6 hours. The specific weight of the copolymers thus obtained varied from 0.75 to 0.78. Graphical representations of the change in the content of compounds of low molecular weight, of the fusing temperature and

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The New Polyamide Type Fiber "Kapronant"

64-58-3-8/20

of the solubility are given as a function of the component ratio. The results given here show among other facts that the fusing point curve with a 50:50 aminocaproic acid - caprolactam ratio has a minimum at  $142^{\circ}$ , and that in this range copolymers can be obtained which can be used for adhesives, varnishes and so on. The copolymers which are interesting for the production of fibers are referred to as "kapronant" and has a higher fusing point and a greater stability in boiling water. The obtained data of their properties are given in tabular form. As the fibers agglutinated when spun they were greased with the anhydrous preparations BV, T-1. The obtained fiber is similar to other polyamide fibers as to its properties but shows a greater resistance against multiple deformation and is soft. There are 3 figures, 2 tables, and 5 references, 2 of which are Soviet.

1. Amidocarbonic acids--Synthesis
2. Polymers--Analysis
3. Synthetic fibers--Production
4. Synthetic fibers--Properties

Card 2/2

KUDRYAVTSEV, G.I.; SHEYN, T.I.; BATIK'YAN, B.A.

New polyamide fiber "kapronant." Khim. prom. no.3:157-160 Ap-Iy  
'58. (MIRA 11:6)  
(Amide) (Textile fibers, Synthetic)

MIKHAYLOV, N.V.; SHEYN, T.I.; GORBACHEVA, V.O.; TOPCHIBASHEVA, V.N.;  
v rabote prinimali uchastiye tekhniki-laboranty; IARIONOV, P.M.;  
VLASOVA, L.P.; MURASHKINA, S.I.

Investigating the molecular structure of synthetic fibers.  
Part 14: Physicochemical and physicomachanical properties of  
the polycapramide - polyundecanamide polyamide group. Vysokom.  
soed. 1 no.2:185-190 F '59. (MIRA 12:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo  
volokna.

(Textile fibers, Synthetic) (Amides)

SHEYN, T.I.; CHELNOKOVA, G.N.; VLASOVA, L.N.

New polyamide fiber based on thiodivaleric acid and hexamethylenediamine. Khim. volok. no.2:19-20 '59. (MIRA 12:9)

1..Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna i INEOS AN SSSR.

(Textile fibers, Synthetic)